



27123

PATENT TRADEMARK OFFICE

## SEQUENCE LISTING

<110> DWORETZKY, STEVEN I  
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TROJNACKI, JOANNE T  
BOISSARD, CHRISTOPHER G  
GRIBKOFF, VALENTIN K

<120> HUMAN KCNQ5 POTASSIUM CHANNEL METHODS AND COMPOSITIONS  
THEREOF

<130> 3053-4091US1

<140> TBA

<141> 2001-05-24

<150> 60/207,389

<151> 2000-05-26

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<170> PatentIn Ver. 2.1

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35 40 45

Gly Ala Arg Met Ser Leu Leu Gly Lys Pro Leu Ser Tyr Thr Ser Ser  
50 55 60

Gln Ser Cys Arg Arg Asn Val Lys Tyr Arg Arg Val Gln Asn Tyr Leu  
65 70 75 80

Tyr Asn Val Leu Glu Arg Pro Arg Gly Trp Ala Phe Ile Tyr His Ala  
85 90 95

Phe Val Phe Leu Leu Val Phe Gly Cys Leu Ile Leu Ser Val Phe Ser  
100 105 110

Thr Ile Pro Glu His Thr Lys Leu Ala Ser Ser Cys Leu Leu Ile Leu  
115 120 125

Glu Phe Val Met Ile Val Val Phe Gly Leu Glu Phe Ile Ile Arg Ile  
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Trp Ser Ala Gly Cys Cys Cys Arg Tyr Arg Gly Trp Gln Gly Arg Leu  
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Arg Phe Ala Arg Lys Pro Phe Cys Val Ile Asp Thr Ile Val Leu Ile  
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Ala Ser Ile Ala Val Val Ser Ala Lys Thr Gln Gly Asn Ile Phe Ala  
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Arg Met Asp Arg Arg Gly Gly Thr Trp Lys Leu Leu Gly Ser Val Val  
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Tyr Ala His Ser Lys Glu Leu Ile Thr Ala Trp Tyr Ile Gly Phe Leu  
225 230 235 240

Val Leu Ile Phe Ser Ser Phe Leu Val Tyr Leu Val Glu Lys Asp Ala  
245 250 255

Asn Lys Glu Phe Ser Thr Tyr Ala Asp Ala Leu Trp Trp Gly Thr Ile  
260 265 270

Thr Leu Thr Thr Ile Gly Tyr Gly Asp Lys Thr Pro Leu Thr Trp Leu  
275 280 285

Gly Arg Leu Leu Ser Ala Gly Phe Ala Leu Leu Gly Ile Ser Phe Phe  
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Ala Leu Pro Ala Gly Ile Leu Gly Ser Gly Phe Ala Leu Lys Val Gln  
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Glu Gln His Arg Gln Lys His Phe Glu Lys Arg Arg Asn Pro Ala Ala  
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Ser	Phe	Lys	Glu	Arg	Val	Arg	Met	Ala	Ser	Pro	Arg	Gly	Gln	Ser	Ile	385	390	395	400
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Val	Ala	Lys	Arg	Lys	Phe	Lys	Glu	Thr	Leu	Arg	Pro	Tyr	Asp	Val	Lys	500	505	510	
Asp	Val	Ile	Glu	Gln	Tyr	Ser	Ala	Gly	His	Leu	Asp	Met	Leu	Cys	Arg	515	520	525	
Ile	Lys	Ser	Leu	Gln	Thr	Arg	Val	Asp	Gln	Ile	Leu	Gly	Lys	Gly	Gln	530	535	540	
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Thr	Thr	Asp	Asp	Leu	Ser	Met	Leu	Gly	Arg	Val	Val	Lys	Val	Glu	Lys	565	570	575	
Gln	Val	Gln	Ser	Ile	Glu	Ser	Lys	Leu	Asp	Cys	Leu	Leu	Asp	Ile	Tyr	580	585	590	



Asp Thr Phe Asp Ala Ala Pro Gln Pro Ala Arg Glu Ala Ala Phe Ala  
 850 855 860

Ser Asp Ser Leu Arg Thr Gly Arg Ser Arg Ser Ser Gln Ser Ile Cys  
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10

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Gln Lys Leu Ser Phe Lys Glu Arg Val Arg Met Ala Ser Pro Arg Gly



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20

25

30

Gln Ser Ile Lys Ser Arg Gln Ala Ser Val Gly Asp Arg Arg Ser Pro  
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Ser Thr Asp Ile Thr Ala Glu Gly Ser Pro Thr Lys Val Gln Lys Ser  
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Pro Lys Trp Arg Glu Ser Lys  
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Met Ala Ala Ala Ser Ser Pro Pro Arg Ala Glu Arg Lys Arg Trp Gly

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Trp Gly Arg Leu Pro Gly Ala Arg Arg Gly Ser Ala Gly Leu Ala Lys

20

25

30

Lys Cys Pro Phe Ser Leu Glu Leu Ala Glu Gly Gly Pro Ala Gly Gly

35

40

45

Ala Leu Tyr Ala Pro Ile Ala Pro Gly Ala Pro Gly Pro Ala Pro Pro

50

55

60

Ala Ser Pro Ala Ala Pro Ala Ala Pro Pro Val Ala Ser Asp Leu Gly











Val Pro Met Tyr Arg Leu Ile Pro Pro Leu Asn Gln Leu Glu Leu Leu  
 370 375 380

Arg Asn Leu Lys Ser Lys Ser Gly Leu Ala Phe Arg Lys Asp Pro Pro  
 385 390 395 400

Pro Glu Pro Ser Pro Ser Gln Lys Val Ser Leu Lys Asp Arg Val Phe  
 405 410 415

Ser Ser Pro Arg Gly Val Ala Ala Lys Gly Lys Gly Ser Pro Gln Ala  
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Gln Thr Val Arg Arg Ser Pro Ser Ala Asp Gln Ser Leu Glu Asp Ser  
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Pro Ser Lys Val Pro Lys Ser Trp Ser Phe Gly Asp Arg Ser Arg Ala  
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Arg Gln Ala Phe Arg Ile Lys Gly Ala Ala Ser Arg Gln Asn Ser Glu  
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Glu Ala Ser Leu Pro Gly Glu Asp Ile Val Asp Asp Lys Ser Cys Pro  
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Cys Glu Phe Val Thr Glu Asp Leu Thr Pro Gly Leu Lys Val Ser Ile  
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Arg Ala Val Cys Val Met Arg Phe Leu Val Ser Lys Arg Lys Phe Lys  
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Glu Ser Leu Arg Pro Tyr Asp Val Met Asp Val Ile Glu Gln Tyr Ser  
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Ala Gly His Leu Asp Met Leu Ser Arg Ile Lys Ser Leu Gln Ser Arg  
 545 550 555 560

Val Asp Gln Ile Val Gly Arg Gly Pro Ala Ile Thr Asp Lys Asp Arg  
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Thr Lys Gly Pro Ala Glu Ala Glu Leu Pro Glu Asp Pro Ser Met Met  
 580 585 590

Gly Arg Leu Gly Lys Val Glu Lys Gln Val Leu Ser Met Glu Lys Lys  
 595 600 605

Leu Asp Phe Leu Val Asn Ile Tyr Met Gln Arg Met Gly Ile Pro Pro  
 610 615 620

Thr Glu Thr Glu Ala Tyr Phe Gly Ala Lys Glu Pro Glu Pro Ala Pro  
625 630 635 640

Pro Tyr His Ser Pro Glu Asp Ser Arg Glu His Val Asp Arg His Gly  
645 650 655

Cys Ile Val Lys Ile Val Arg Ser Ser Ser Ser Thr Gly Gln Lys Asn  
660 665 670

Phe Ser Ala Pro Pro Ala Ala Pro Pro Val Gln Cys Pro Pro Ser Thr  
675 680 685

Ser Trp Gln Pro Gln Ser His Pro Arg Gln Gly His Gly Thr Ser Pro  
690 695 700

Val Gly Asp His Gly Ser Leu Val Arg Ile Pro Pro Pro Pro Ala His  
705 710 715 720

Glu Arg Ser Leu Ser Ala Tyr Gly Gly Gly Asn Arg Ala Ser Met Glu  
725 730 735

Phe Leu Arg Gln Glu Asp Thr Pro Gly Cys Arg Pro Pro Glu Gly Thr  
740 745 750

Leu Arg Asp Ser Asp Thr Ser Ile Ser Ile Pro Ser Val Asp His Glu  
755 760 765

Glu Leu Glu Arg Ser Phe Ser Gly Phe Ser Ile Ser Gln Ser Lys Glu  
770 775 780

Asn Leu Asp Ala Leu Asn Ser Cys Tyr Ala Ala Val Ala Pro Cys Ala  
785 790 795 800

Lys Val Arg Pro Tyr Ile Ala Glu Gly Glu Ser Asp Thr Asp Ser Asp  
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Leu Cys Thr Pro Cys Gly Pro Pro Pro Arg Ser Ala Thr Gly Glu Gly  
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Gly Ser Pro Leu Pro Pro Gly Ala Pro Leu Pro Gly Pro Gly Ser Gly  
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Ser Gly Ser Ala Cys Gly Gln Arg Ser Ser Ala Ala His Lys Arg Tyr  
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Trp Ala Phe Val Tyr His Val Phe Ile Phe Leu Leu Val Phe Ser Cys  
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Leu Val Leu Ser Val Leu Ser Thr Ile Gln Glu His Gln Glu Leu Ala  
115 120 125

Asn Glu Cys Leu Leu Ile Leu Glu Phe Val Met Ile Val Val Phe Gly  
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Leu Glu Tyr Ile Val Arg Val Trp Ser Ala Gly Cys Cys Cys Arg Tyr  
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Arg Gly Trp Gln Gly Arg Phe Arg Phe Ala Arg Lys Pro Phe Cys Val  
165 170 175

Ile Asp Phe Ile Val Phe Val Ala Ser Val Ala Val Ile Ala Ala Gly  
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Thr Gln Gly Asn Ile Phe Ala Thr Ser Ala Leu Arg Ser Met Arg Phe  
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Leu Gln Ile Leu Arg Met Val Arg Met Asp Arg Arg Gly Gly Thr Trp  
210 215 220

Lys Leu Leu Gly Ser Val Val Tyr Ala His Ser Lys Glu Leu Ile Thr  
225 230 235 240

Ala Trp Tyr Ile Gly Phe Leu Val Leu Ile Phe Ala Ser Phe Leu Val  
245 250 255



